

WHAT IS CLAIMED IS:

- 1           1.       A method for defining asset classes in a digital library, comprising:  
2           defining at least one asset class to include at least one attribute;  
3           defining attributes for each asset class to have an attribute object type;  
4           defining the attribute object type to indicate one of a plurality of different data  
5           structure formats that are searchable through separate application programs, wherein the  
6           attribute object types in one asset class are implemented in different data structure  
7           formats;  
8           generating an asset object instance for each asset class; and  
9           generating information in the asset object instance on a file location of attribute  
10          objects providing the attributes for the generated asset object instance.
- 1           2.       The method of claim 1, wherein generating asset object instances further  
2          comprises:  
3           generating attribute information into the asset object instance for at least one  
4          attribute object of the asset object instance.
- 1           3.       The method of claim 1, wherein one object type comprises a database  
2          object and a second object type comprises a text file, wherein one asset class has at least  
3          one attribute defined to have a text attribute object and one attribute defined to have a  
4          database attribute object.
- 1           4.       The method of claim 3, wherein a third object type comprises a  
2          multimedia file, wherein one attribute is defined to have an attribute object comprising at  
3          least one multimedia file.
- 1           5.       The method of claim 1, wherein attributes for an asset class are defined to  
2          include an attribute name, attribute value type, and an attribute file location of the  
3          attribute object, wherein when generating the asset object instances further comprises:

4 generating values in the generated asset object instance for the attribute name, the  
5 attribute value type, and the attribute file location for attribute objects.

1 6. The method of claim 1, wherein one attribute is defined to include a  
2 plurality of sub-attributes, wherein sub-attributes are defined to include a sub-attribute  
3 name, a sub-attribute value type, and a sub-attribute file location, wherein generating  
4 asset object instances further comprises:  
5 generating values in the generated asset object instance for the sub-attribute name,  
6 the sub-attribute value type, and the sub-attribute file location for a sub-attribute object.

1 7. The method of claim 1, wherein one attribute type comprises a  
2 relationship attribute indicating a relationship attribute object defining an association of a  
3 first and second asset types.

1 8. The method of claim 7, wherein the relationship attribute includes a  
2 relationship location indicating a file location of the relationship attribute object.

1 9. The method of claim 7, wherein the relationship attribute object comprises  
2 a database table, wherein a first column in the database table is for unique identifiers of  
3 instances of the first asset type and a second column in the database table is for unique  
4 identifiers of instances of the second asset type, wherein a row in the database table  
5 identifies one instance of the first asset type identified by the unique identifier in the first  
6 column of the row that is associated with one instance of the second asset type identified  
7 by the unique identifier in the second column of the row.

1 10. The method of claim 1, wherein the definition of each attribute for each  
2 asset is implemented in at least one computer data structure.

1           11.     The method of claim 10, wherein the definition of each attribute for an  
2     asset class is implemented in an Extensible Markup Language (XML) document, wherein  
3     each defined attribute for an asset class comprises a tagged element in the XML  
4     document and wherein information for each attribute is embedded in at least one tagged  
5     attribute of the tagged element for the attribute.

1           12.     The method of claim 11, wherein the definition of the attribute objects for  
2     each asset object instance is maintained in tagged elements of an XML file

1           13.     The method of claim 1, wherein the asset classes provide information on a  
2     film production, wherein the defined asset classes include a movie asset class, a scene  
3     asset class, a background asset class, and a character asset class, wherein the attribute  
4     objects provide information on instances of movie, scene, background, and character  
5     assets.

1           14.     The method of claim 1, further comprising:  
2             defining an additional attribute for one asset class after an instance for the asset  
3     class has been generated, wherein defining the additional attribute does not affect  
4     instances of the asset class generated before the additional attribute for the asset class  
5     was defined.

1           15.     A system for maintaining information, comprising:  
2             a digital library;  
3             means for defining at least one asset in the digital library class to include at least  
4     one attribute;  
5             means for defining attributes for each asset class to have an attribute object type;  
6             means for defining the attribute object type to indicate one of a plurality of  
7     different data structure formats that are searchable through separate application

8 programs, wherein the attribute object types in one asset class are implemented in  
9 different data structure formats;  
10 means for generating an asset object instance for each asset class; and  
11 means for generating information in the asset object instance on a file location of  
12 attribute objects providing the attributes for the generated asset object instance.

1 16. The system of claim 15, wherein the means for generating asset object  
2 instances further performs:

3 generating attribute information into the asset object instance for at least one  
4 attribute object of the asset object instance.

1 17. The system of claim 15, wherein one object type comprises a database  
2 object and a second object type comprises a text file, wherein one asset class has at least  
3 one attribute defined to have a text attribute object and one attribute defined to have a  
4 database attribute object.

1 18. The system of claim 17, wherein a third object type comprises a  
2 multimedia file, wherein one attribute is defined to have an attribute object comprising at  
3 least one multimedia file.

1 19. The system of claim 15, wherein one attribute type comprises a  
2 relationship attribute indicating a relationship attribute object defining an association of a  
3 first and second asset types.

1 20. The system of claim 15, wherein the relationship attribute includes a  
2 relationship location indicating a file location of the relationship attribute object.

1 21. The system of claim 15, wherein the definition of each attribute for an  
2 asset class is implemented in an Extensible Markup Language (XML) document, wherein

3 each defined attribute for an asset class comprises a tagged element in the XML  
4 document and wherein information for each attribute is embedded in at least one tagged  
5 attribute of the tagged element for the attribute.

1 22. The system of claim 15, further comprising:  
2 means for defining an additional attribute for one asset class after an instance for  
3 the asset class has been generated, wherein the means for defining the additional attribute  
4 does not affect instances of the asset class generated before the additional attribute for the  
5 asset class was defined.

1 23. An article of manufacture including code for defining asset classes in a  
2 digital library, wherein the code causes operations comprising:  
3 defining at least one asset class to include at least one attribute;  
4 defining attributes for each asset class to have an attribute object type;  
5 defining the attribute object type to indicate one of a plurality of different data  
6 structure formats that are searchable through separate application programs, wherein the  
7 attribute object types in one asset class are implemented in different data structure  
8 formats;  
9 generating an asset object instance for each asset class; and  
10 generating information in the asset object instance on a file location of attribute  
11 objects providing the attributes for the generated asset object instance.

1 24. The article of manufacture of claim 23, wherein generating asset object  
2 instances further comprises:  
3 generating attribute information into the asset object instance for at least one  
4 attribute object of the asset object instance.

1 25. The article of manufacture of claim 23, wherein one object type comprises  
2 a database object and a second object type comprises a text file, wherein one asset class

3 has at least one attribute defined to have a text attribute object and one attribute defined  
4 to have a database attribute object.

1 26. The article of manufacture of claim 25, wherein a third object type  
2 comprises a multimedia file, wherein one attribute is defined to have an attribute object  
3 comprising at least one multimedia file.

1 27. The article of manufacture of claim 23, wherein attributes for an asset  
2 class are defined to include an attribute name, attribute value type, and an attribute file  
3 location of the attribute object, wherein when generating the asset object instances further  
4 comprises:  
5 generating values in the generated asset object instance for the attribute name, the  
6 attribute value type, and the attribute file location for attribute objects.

1 28. The article of manufacture of claim 23, wherein one attribute type  
2 comprises a relationship attribute indicating a relationship attribute object defining an  
3 association of a first and second asset types.

1 29. The article of manufacture of claim 28, wherein the relationship attribute  
2 includes a relationship location indicating a file location of the relationship attribute  
3 object.

1 30. The article of manufacture of claim 23, wherein the definition of each  
2 attribute for an asset class is implemented in an Extensible Markup Language (XML)  
3 document, wherein each defined attribute for an asset class comprises a tagged element in  
4 the XML document and wherein information for each attribute is embedded in at least  
5 one tagged attribute of the tagged element for the attribute.

1           31.    The article of manufacture of claim 23, further comprising:  
2           defining an additional attribute for one asset class after an instance for the asset  
3   class has been generated, wherein defining the additional attribute does not affect  
4   instances of the asset class generated before the additional attribute for the asset class  
5   was defined.

              32.    A computer-readable medium including data structures for maintaining  
1   information on asset classes in a digital library, comprising:  
2           a definition of at least one asset class including at least one attribute;  
3           a definition of attributes for each asset class having an attribute object type;  
4           a definition of the attribute object type indicating one of a plurality of different  
5   data structure formats that are searchable through separate application programs, wherein  
6   the attribute object types in one asset class are implemented in different data structure  
7   formats;  
8           an asset object instance for each asset class; and  
9           information in the asset object instance on a file location of attribute objects  
10   providing the attributes for the generated asset object instance.

1           33.    The computer readable medium of claim 32, wherein the asset object  
2   instances further comprise:  
3           attribute information for at least one attribute object of the asset object instance.

1           34.    The computer readable medium of claim 32, wherein one object type  
2   comprises a database object and a second object type comprises a text file, wherein the  
3   definition of one asset class has at least one attribute defined to have a text attribute  
4   object and one attribute defined to have a database attribute object.

1           35.    The computer readable medium of claim 34, wherein a third object type  
2   comprises a multimedia file, wherein the definition for one attribute indicates an attribute  
3   object comprising at least one multimedia file.

1           36.    The computer readable medium of claim 32, wherein the definition of  
2   attributes for an asset class include an attribute name, attribute value type, and an  
3   attribute file location of the attribute object, wherein the definition of the asset object  
4   instances further includes:  
5           values for the attribute name, the attribute value type, and the attribute file  
6   location for attribute objects.

1           37.    The computer readable medium of claim 32, wherein one defined attribute  
2   type comprises a relationship attribute indicating a relationship attribute object defining  
3   an association of a first and second asset types.

1           38.    The computer readable medium of claim 37, wherein the relationship  
2   attribute includes a relationship location indicating a file location of the relationship  
3   attribute object.

1           39.    The computer readable medium of claim 32, wherein the definition of  
2   each attribute for an asset class is implemented in an Extensible Markup Language  
3   (XML) document, wherein each defined attribute for an asset class comprises a tagged  
4   element in the XML document and wherein information for each attribute is embedded in  
5   at least one tagged attribute of the tagged element for the attribute.

1           40.    The computer readable medium of claim 32, further comprising:  
2           a definition of an additional attribute for one asset class generated after an  
3   instance for the asset class was generated, wherein defining the additional attribute does



- 4 not affect instances of the asset class generated before the additional attribute for the
- 5 asset class was defined.

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